Planning, Design and Access Statement

Bean Tunnel Infrastructure Works

JULY 2024

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This report dated 12 July 2024 has been prepared for Kenty County Council (the “Client”) in accordance with the terms and conditions of appointment dated **Click here to enter a date.**(the “Appointment”) between the Client and **Arcadis (UK) Limited** (“Arcadis”) for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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1 Introduction

1.1.1 This Planning, Design and Access Statement (PDAS) has been prepared by Arcadis Consulting (AUK) Ltd. AUK is instructed by Kent County Council (KKC) (Major Capital Programme) (the Applicant) to prepare and submit a full planning application for planning permission under the Town and Country Planning Act 1990, as amended (the 1990 Act), for the resubmission of proposed infrastructure works at Bean Tunnel (the Proposed Development).

1.1.2 The Proposed Development includes the construction of a new tunnel through the chalk spine under the B255 Bean Road between Bluewater Shopping Centre and the Eastern Quarry site, serving to directly connect the shopping centre to the new Eastern Quarry development and Ebbsfleet International Railway Station.

1.1.3 The planning application comprises a resubmission for the following works:

> ***'Full planning application for a new tunnel and associated road works for bus, cycling and pedestrian access to the east of Bluewater Shopping Centre, to link the Eastern Quarry, being developed as part of Ebbsfleet Garden City, and Bluewater shopping centre through a chalk spine which separates the two former quarries.'***

1.1.4 The application is located within the Dartford borough and is submitted to KCC ('the County Planning Authority' (CPA)). Given it is being submitted on behalf of KCC (Major Capital Programme), the application comprises a Regulation 3 planning application meaning KCC is both applicant and determining authority.

1.2 Background Context

1.2.1 This planning application comprises a resubmission of a previous application from November 2019 (application reference DA/19/1549) ('the Previous Application). A resubmission is made as the associated planning permission (the Previous Permission) has now lapsed. KCC's Planning Committee resolved to grant full planning permission for the development proposed by the Previous Application subject to conditions on 27 May 2020. The full description of development comprised the following:

> *'Full planning application for a new tunnel and associated road works for bus, cycling and pedestrian access to the east of Bluewater Shopping Centre, to link the Eastern Quarry, being developed as part of Ebbsfleet Garden City, and Bluewater shopping centre through a chalk spine which separates the two former quarries.'*

1.2.2 The Previous Application was made valid on 5 November 2019. It was submitted on behalf of KCC (Major Capital Programme) and like the current submission constituted a Regulation 3 application.

1.2.3 The Previous Application was allocated reference number: DA/19/1549 (KCC/DA/0232/2019) and falls within the Dartford Borough Council (DBC) area. DBC and Ebbsfleet Development Corporation (EDC) (responsible for delivery of nearby Ebbsfleet Garden Village) were consultees for the Previous Application. The Previous Application was granted full planning permission on 24 June 2020, subject to conditions. The Previous Permission remained valid for three years in line with the stipulations of Condition 1.

1.2.4 AUK understands that all pre-commencement conditions attached to the Previous Permission were discharged. We further understand that due to a funding gap, the project was placed on hold; however new funding provisions are now in place and work to deliver the scheme has resumed. Early works that took place on site previously were not considered to represent a lawful commencement of development on site by the CPA.

1.2.5 In order to expedite delivery, the Applicant is keen to secure planning permission for the current application as expediently as possible, utilising existing information insofar as reasonably possible whilst ensuring the submission is technically sound and procedurally robust.

1.2.6 The Previous Application was determined under the policies of the most relevant Development Plan, which comprised the Dartford Core Strategy, (adopted 2011) and Dartford Development Policies Plan (adopted 2017), as well as national guidance contained within the National Planning Policy Framework (NPPF). The policy framework remains the same, save for targeted updates to national guidance relating to renewable energy and housing land supply matters which has no direct bearing on this proposal (NPPF, December 2023).

1.2.7 Notwithstanding the above, there are some key issues which have required further consideration as part of the proposed resubmission, some of which did not feature in the 2020 planning application given circumstances at the time and the basis for that submission.

1.2.8 Key issues and nominal amendments to the scheme relate to the following:

- The application site boundary has been marginally reduced from 1.16ha to 1.02ha. This has no direct bearing on the proposals, nor land ownership or delivery considerations. The application red line boundary has been reduced owing to the neighbouring development delivering a small section of the development site on the Eastern Quarry Whitecliff side.
- Mandatory Biodiversity Net Gain (BNG) came into effect via the provisions of the Environment Act 2023 for 'major' developments 12 February 2024. The Proposed Development will deliver 14.48% BNG, which was not a requirement during the original application submission and may be considered an overall betterment to the scheme.
- Given the sensitivity of the site, ecological surveys have been updated. This includes an updated Extended Phase 1 Habitat Survey and BNG habitat conditions survey. In addition to the above, Bat Surveys (including tunnel inspections and swarming surveys) were undertaken in October 2023 and showed similar activity levels to previous survey. Further bat surveys (hibernation, emergence) have also been undertaken to inform the application submission, as well as to meet the requirements for an updated bat licence application. The emergence surveys also have been submitted with the application submission.
- As the Previous Permission has lapsed, a new bat licence will need to be applied for in line with the updated resubmission, following the grant of planning permission.
- The initial plans presented as part of the Previous Application aimed to close the northern haulage tunnel. Nevertheless, during the discharge of condition process, in accordance with Condition 13 and in agreement with KCC, it was decided that the northern haulage tunnel will be kept open. However, it will be fitted with grills at the entrances deter human access while facilitating bat entry and exit, as a means of ecological mitigation. Wider ecological measures will be implemented after the tunnel has served its construction purposes. Therefore, this nominal change is reflected in the updated submission.
- The landscaping has also been amended in line to reach the BNG requirements, which is set out the proceeding paragraphs of this statement.

1.3 Need for the Proposed Development

1.3.1 Fastrack serves as a specialised public transportation system designed to interconnect key established and upcoming developments within Dartford and Gravesham. The network comprises key express routes that seamlessly link with various regions of Kent Thameside through to the feeder routes and rural connections. The primary objective of Fastrack is to optimise travel possibilities within Kent Thameside through public transportation, fostering a deliberate and crucial shift away from reliance on cars. By leveraging the public transport network, Fastrack aims to integrate both existing and forthcoming communities, fostering the foundation of sustainable development within the area.

1.3.2 This proposal forms part of the Fastrack rapid bus transit system which is one of the main infrastructure projects for Ebbsfleet Garden City. It seeks to contribute to the objective of a modal shift from private car to public transport usage. The proposal aims to create a direct pedestrian, cycle and bus link between development within Eastern Quarry and the Bluewater Shopping Centre (Bluewater).

1.3.3 Given the significant need for such development and regrettably, owing to the permission being expired, Arcadis are seeking consent for once more on behalf of KCC the bus tunnel. The proposal crucially will form part of the Fastrack Full Network and would therefore provide a central link between Ebbsfleet International Station and Bluewater. Thus, forming a key infrastructure link within the area adding to and in meeting the paradigms of sustainable modes of travel.

1.4 Pre-Application Engagement

1.4.1 A pre-application enquiry was submitted to KCC in November 2023. A meeting was held with KCC Officers and the Council's County Ecologist 19 December 2023. The pre-application meeting unfolded positively, with the Officer's expressing agreement with Arcadis' proposed approach and planning strategy for the resubmission of the planning application, together with the decision to utilise the previously approved documents and drawings, where possible.

1.4.2 Throughout the course of the meeting, the discussions predominantly focussed on the recently enacted BNG and the pivotal role it would play in the revised submission. While it was acknowledged that the planning position largely remain unchanged, with only minor updates to the NPPF, the officers emphasised the importance of addressing the forthcoming BNG requirements comprehensively in the resubmission including providing a Biodiversity Net Gain layout. The meeting ensured a shared understanding of the key planning considerations and enabled a clear strategy for the upcoming resubmission.

1.4.3 Arcadis and the project team have worked closely with KCC Officers (inclusive of the County Ecologist) to ensure that this application submission is robust in meeting the updated requirements, as well as ensuring the proposal does not divert too significantly from that previously approved in June 2020 given the importance of the scheme and its delivery in contribution to Ebbsfleet Garden City and Bluewater Shopping Centre.

1.4.4 In addition to the above, a further meeting was held with KCC's County Ecologist on 8 February 2024 to confirm approach to survey windows. It was verbally confirmed during the meeting that the data from the updated hibernation surveys confirm that there is an increase in the number of hibernating bats but mainly due to boxes installed as previous mitigation. Most bats are still in the southern haulage tunnel

with other hibernation features in tunnels remaining the same as the previous submission.

1.4.5 The County Ecologist indicated that she is satisfied with the hibernation data presented, albeit confirmed that she would like to see first set of emergence survey data to be certain that there are no breeding bats, and that general bat activity has not increased since the previous submissions. Emergence surveys will be undertaken in May 2024 in line with the optimum seasonal survey windows and will follow this submission.

1.4.6 KCC Planning Officers wrote confirming acceptance of this approach on 16 February 2024, whilst also emphasising the importance of BNG and that the planning application should adequately address the legislative requirements for the planning application to be deemed valid.

1.5 EIA Screening Opinion

1.5.1 It is assumed the proposal does not constitute EIA development based on the Screening Opinion received by KCC on 31 October 2019. The Opinion concluded that extent of the works at that time is small in scale and whilst the physical changes would have a localised visual impact and result in some loss of habitat and changes in topography, this can be '*adequately mitigated by the landscaping and management measures that are to be developed'*. Given the nominal changes put forward, together with the slight reduction in the overall red line, it is considered this stance remains. This approach was discussed and agreed at the productive pre-application meeting held with KCC Officers.

1.5.2 Turning to ecological impacts, the Opinion determined that the *'proposal includes measures to address biodiversity impacts of the proposals and mitigation as detailed in the ecological assessments submitted in relation to reedbed and standing open water habitat, tree planting, bats, reptile, dormouse, nesting birds and great crested newt*'. Owing to the expiry dates of the ecological surveys previously submitted, reports and surveys have been updated to accompany this updated application submission to ensure a comprehensive submission has been provided in line with the mandatory updates. As the scale and nature of the proposals remain the same, with nominal changes and further ecological betterment being provided because of BNG, KCC has not undertaken further EIA Screening requests with KCC.

1.5.3 Therefore, the previous conclusions of the EIA Screening Opinion received by KCC in Arcadis' opinion remain unchanged. KCC Officers confirmed they will rescreen the application which is a mandatory process when validating and registering a planning application by a determining authority, although confirmed they could not see the position changing.

1.6 Purpose and Structure of the Statement

1.6.1 The purpose of this Planning, Design and Access Statement is to describe the Proposed Development for which planning permission is sought and to outline how the proposals respond to and comply with, relevant national and local planning policy to be weighed by KCC, as the Local Planning Authority (LPA).

1.6.2 This Statement seeks to demonstrate that the Proposed Development is in accordance with the Development Plan, considering other relevant policies in order that the LPA can determine the development proposal without delay. It has also been produced to provide information to assist KCC, as the determining body for the planning application and for consultees and other stakeholders to be informed about the Proposed Development.

1.6.3 The structure of the Planning, Design and Access Statement is as follows:

- **Chapter 2** provides a brief description of the application site and its surroundings;
- **Chapter 3** describes the description of the development proposals before the local planning authority
- **Chapter 4** sets out the design objectives for the scheme and describes in detail the component parts of the Proposed Development;
- **Chapter 5** sets out the local and national planning policy context of relevance to the proposal.
- **Chapter 6** appraises and considers the extent to which the Proposed Development complies with relevant policies at a national and local level.
- **Chapter 7** reaches conclusions on the overall compliance of the development proposals with planning policy in reaching a recommendation on the acceptance of the Proposed Development.

1.7 Documentation Submitted with Planning Application

1.7.1 This Planning, Design and Access Statement should be read in conjunction with the supporting reports and drawings accompanying the application comprising of:

- Planning Application Form;
- Requisite Application Fee;
- Planning, Design and Access Statement;
- Structural Survey/Land Stability Survey (covered within the Planning Statement);
- Air Quality (Jacobs) & Construction Dust Assessment (Arcadis);
- Bluewater Full Input Data and Results;
- Ecological Impact Assessment (EcIA) (Bat Hibernation Survey Report Appended);
- Reptile Precautionary Method Statement;
- Dormouse Precautionary Method Statement;
- BNG Report, Plan & Metrics;
- BNG Conditions Sheet (within the BNG Report);
- BNG Baseline Habitat Figure & Proposed / Post Construction Habitats Figure (within the BNG Report);
- Existing Tunnel Sketch;
- Suite of Application Drawings:
    - Location Plan
    - General Arrangement Plan
    - Sections and Profiles
    - Design Drainage Plan
    - Site Clearance East and West
    - Lighting Design
    - Traffic Signs and Road Markings
    - New Tunnel Traffic Signals
    - Landscaping Plans
    - Design Kerbing Pavement & Fencing
    - Pavement
    - Tunnel Construction Sequence
    - Cliff Face Elevations / Cliff Stability
    - Design Existing Utilities
    - Sections and profile-Profiles Jacobs
    - Vehicle Crossing

- Pedestrian Guardrail Vehicle Bar Infill
- Interface with Existing Pavement Construction Longitudinal and Transverse
- Permanent Reinstatement Bituminous Carriageways
- Precast Concrete Kerb, Quadrant, Channel & Edging
- Pedestrian Ramps

- Condition Discharge documentation for Conditions 6 – 17 (minus the CEMP and CMP Conditions 8 & 9). You will note that the submission deliverables includes the details formally provided under references: DA/19/1549 (KCC/DA/0232/2019), as well as those technical documents discharged under Discharge of Condition Applications: DA/19/1549R1-17.

1.7.2 Arcadis has resubmitted the original documents (with updates, where required) with the updated planning submission; together with updated ecological surveys as referenced above, also in line with the provisions of the Environment Act 2023 and the requirement to address BNG for major application submissions.

1.7.3 The resubmission of the previous technical work, as well as those formally discharged will eliminate the requirement of abortive work, as well as avoiding the need to formally attach planning conditions to any forthcoming planning consent (minus the CEMP and CMP). This process was agreed at the outset with KCC given the deliverables have already been satisfactorily discharged. This will assist in expediting delivery of this important transport scheme on behalf of the KCC Major Capital Programme that facilitates sustainable travel, as well as interconnectivity between Eastern Quarry and Bluewater Regional Shopping Centre – the strategically recognised sites by planning policy.

1.7.4 The original appointed contractor is no longer involved in the project. As a result, the CEMP and CMP that were previously discharged under applications DA/19/1549R1-17are no longer applicable. The documents have therefore been omitted from this resubmission, as well as any relevant drawings previously provided in that regard. The new contractor will develop a revised plan and document which will be provided to the LPA at the appropriate time, when possible.

1.7.5 It is necessary to acknowledge the importance of the documents and drawings on which this planning application is based. These materials were created by third parties. Arcadis wishes to emphasise that the conclusions drawn regarding their significance have been carefully considered and addressed in detail as part of this Statement.

2 Site Context

2.1.1 This Chapter provides a description of the application site and its surroundings, as well as the planning history associated with the site.

2.2 Development Site and its Surroundings

2.2.1 The Application Site comprises land through the chalk spine under the B255 Bean Road between the two former quarries, Western Quarry, now Bluewater Shopping Centre and the Eastern Quarry site, formally known as the Whitecliff side. It measures approximately 1.02ha in size. The proposal lies within Dartford Borough to the west and within the Ebbsfleet Development Corporation area to the east (Eastern Quarry).

2.2.2 The Eastern Quarry, originally a chalk quarry, is being transformed into a residential development located to the east of the site within the Ebbsfleet Development Area. It plays a significant role in the Ebbsfleet Valley Strategic Site and is part of the Ebbsfleet to Stone Priority Area Development (under the former Local Plan). The development of the Eastern Quarry aims to create a Fastrack connection to guarantee frequent transportation services to Ebbsfleet Central, Bluewater, Dartford, and Gravesend.

2.2.3 The Application Site is situated beneath the current B255 Bean Road, as depicted below in figure 2.1. The land use in the designated area encompasses the highway network stretching from the eastern terminus of Lime Tree Avenue to Bluewater Parkway. This area features several reed beds, water bodies and established vegetation, including trees. Notably, there is an existing cliff face and chalk spine beneath the B255 Bean Road.

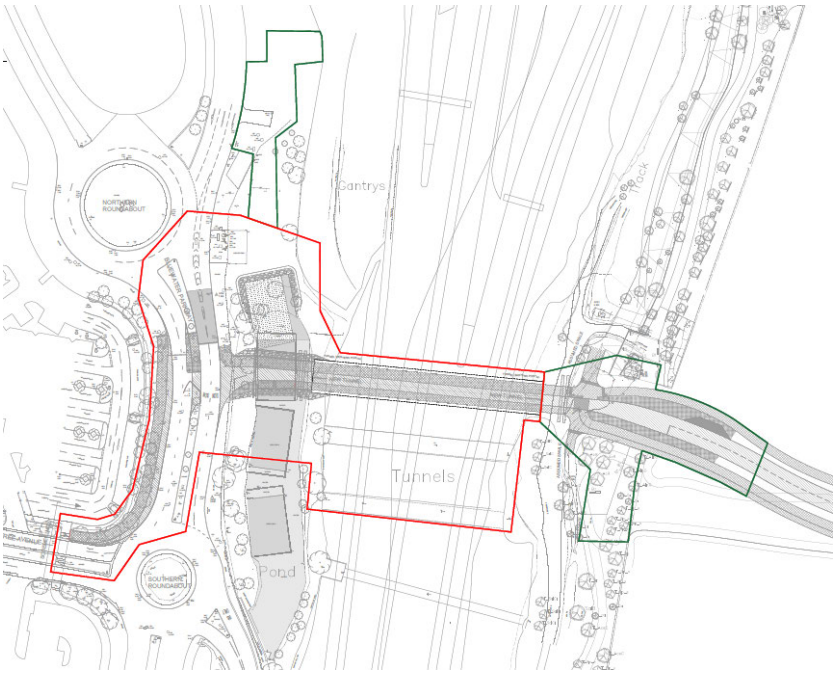


Figure 2.1: Application Boundary

2.2.4 Within the application red line boundary, two tunnels within the chalk spine currently provide a link between the Western and Eastern Quarry, enabling the transportation of materials between the quarries

during the construction of Bluewater Shopping Centre. These tunnels are known as the northern and southern haulage tunnels. Additionally, there is a former conveyor tunnel previously blocked from Cam Land. The southern haulage tunnel now serves as an ecological mitigation feature, offering a habitat for bats. The northern haulage tunnel is presently accessible and will be utilised during the construction phase of the development as outlined in the Proposed Development section of this Statement, later returning to ecological mitigation as proposed within this application.

2.3 Statutory Designations and Protected Features

2.3.1 The site in question does not contain any statutory designation, albeit part of the site is located within a Biodiversity Opportunity Area (BOA) of the adopted Dartford Local Plan and a small section of land is identified as Borough Open Space (BOS). Furthermore, the site does contain protected species such as bats, which will be explored in greater depth within the planning assessment section under biodiversity.

2.4 Planning History

2.4.1 From reviewing KCC's online available records, as well as the previously approved KCC committee report, several other permissions have been granted by the CPA relating to Fastrack. This includes the following:

- In December 2002 permission was granted (DA/01/026) for the construction of a dedicated public transport route known as Fastrack Phase 1 to run between Dartford and Greenhithe railway stations via Home Gardens, Darenth Road, Princes Road, Darenth Valley Hospital, Bluewater and St Clements Way. This was considered by the Planning Applications Committee on 14 May 2002.
- In November 2003 permission was granted for the Kent Thameside Fastrack, Everard's Link Phase 1. This being the provision of a bus priority route and interchange, including associated landscaping works, part of the Kent Thameside Fastrack major scheme (DA/03/627) relating to land north of railway line & east of Station Road, Greenhithe. This was considered by the Planning Applications Committee on 14 October 2003.
- In January 2007 permission was granted for Kent Thameside Fastrack, Everard's Link Phase 2, being the provision of a bus priority route linking the bus/rail interchange with the new development at Ingress Park (including associated landscaping works, and dismantling and re-erection of listed wall and associated railings along The Avenue), which form part of the Kent Thameside Fastrack Major Scheme (DA/06/856) relating to land north of railway between Station Road & The Avenue, Greenhithe. This was considered by the Planning Applications Committee on 7 November 2006.
- The Ebbsfleet Implementation Framework (2017) included the upgrading of the Fastrack bus system to ensure a quality, frequent, affordable, viable and sustainable rapid public transport system be within 5 minutes' walk of every neighbourhood. The Framework states that this would be through the upgrading of Fastrack's speed, frequency, and reliability through the building-out of missing sections of segregated track and by maximising of levels of priority across the network. The completed Fastrack network will aim to reduce car-dependency in the area, therefore achieving greater public transport modal split across Dartford and Gravesham and providing better integration with the central transport hub at Ebbsfleet International Station and a more direct route to Bluewater, Darent Valley Hospital and facilities in Dartford and Gravesend town centres.

3 Proposed Development

3.1.1 The proposed application seeks permission for the following ('the Proposed Development):

'Full planning application for a new tunnel and associated road works for bus, cycling and pedestrian access to the east of Bluewater Shopping Centre, to link the Eastern Quarry, being developed as part of Ebbsfleet Garden City, and Bluewater shopping centre through a chalk spine which separates the two former quarries.'

3.2 Development Proposals

3.2.1 The Proposed Development comprises the construction of a new bus tunnel and road infrastructure providing bus, cycling, and pedestrian accessibility on the eastern side of Bluewater. The Proposed Development aims to establish a connection to the adjacent residential development within the former Eastern Quarry, known as the Whitecliff development which is currently under construction. The tunnel, situated beneath the chalk spine, beneath the B255 Bean Road, serves as the conduit linking the two former quarries.

3.2.2 The Proposed Development will be located north of the two existing tunnels within the application red line boundary. It is designed to stretch 80 metres in length and will be equipped with a protective portal hood. The tunnel is intended to accommodate a 3.5-metre wide single-way Fastrack busway, establishing a connection between Eastern Quarry and Bluewater. Moreover, the Proposed Development incorporates a separate 2-metre-wide footway on the southern side of the tunnel, with a 0.5-metre paved surface separation from the bus lane. On the northern side of the tunnel, there will be a 3-metre-wide shared use footway/cycleway, similarly featuring a 0.5-metre paved surface separation from the bus lane. These elements are key to the Ebbsfleet Garden City corridor network.

3.2.3 In addition to the above, Toucan crossings will be implemented for both carriageways at Bluewater Park, promoting efficient movement and safer interaction between both pedestrian and cyclists, facilitating sustainable means of travel.

3.2.4 The proposed general arrangement is shown below in Figure 3.1:

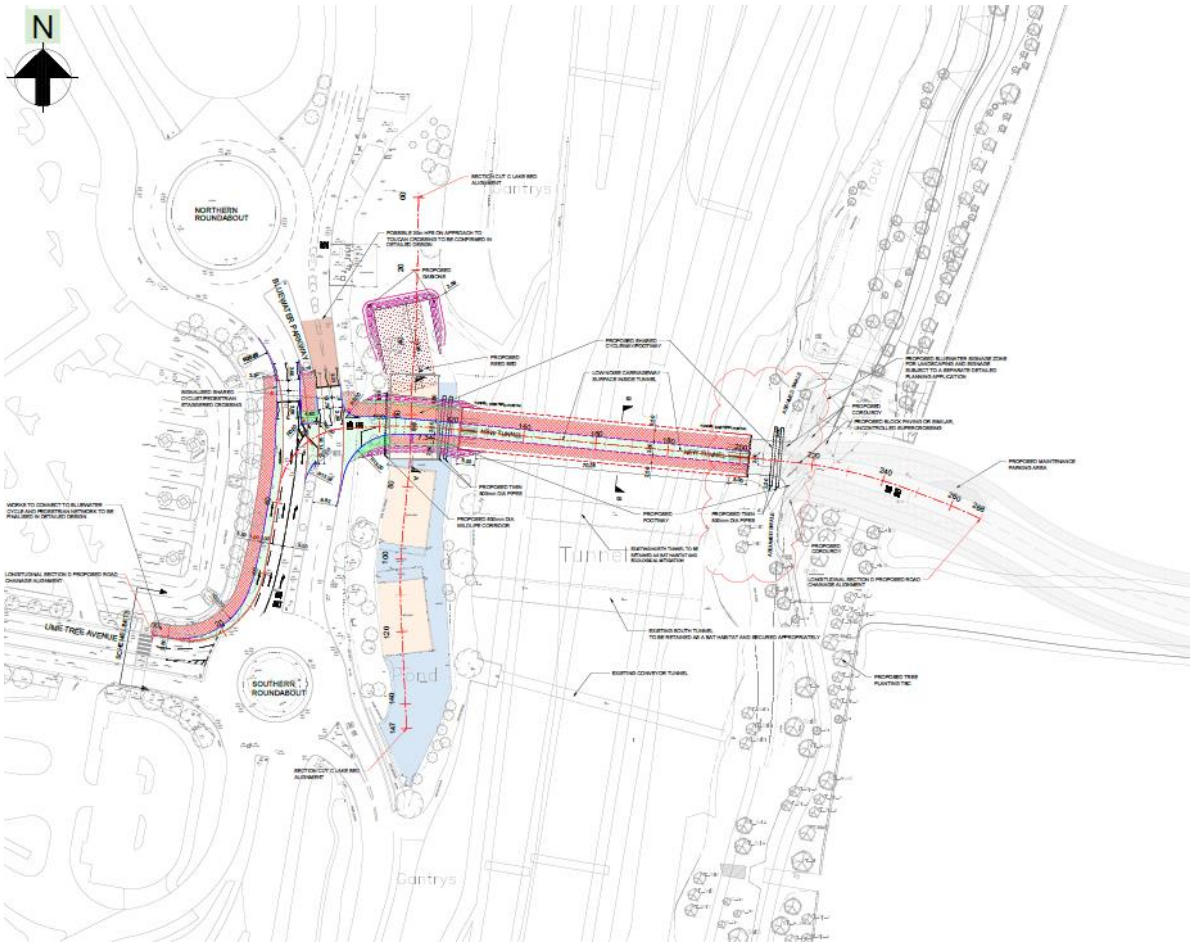


Figure 3.1: Proposed General Arrangement Plan

3.2.5 The southern haulage tunnel will be retained and safeguarded to protect bats and their roosts, with mitigation features being in place such as hibernation boxes, with some already installed following the previous consent. A fence and gate will be erected at the conveyancing tunnel portal to prevent unauthorised entry while enabling access for monitoring. In addition, the northern haulage tunnel portal will be sealed with a gap fitted with bat grilles to deter human access while facilitating bat entry and exit, as a means of ecological mitigation. This was agreed and approved under discharge of condition application Ref: DA/19/1549. To offset the loss of bat roosting features in the northern tunnel, new roosting structures for bats will be incorporated into the tunnel.

3.2.6 The northern haulage tunnel will, however, be maintained during the construction phase for accessibility during the construction works and then converted into ecological mitigation, which this application seeks consent for. The proposed visualisations of the tunnels are depicted below:

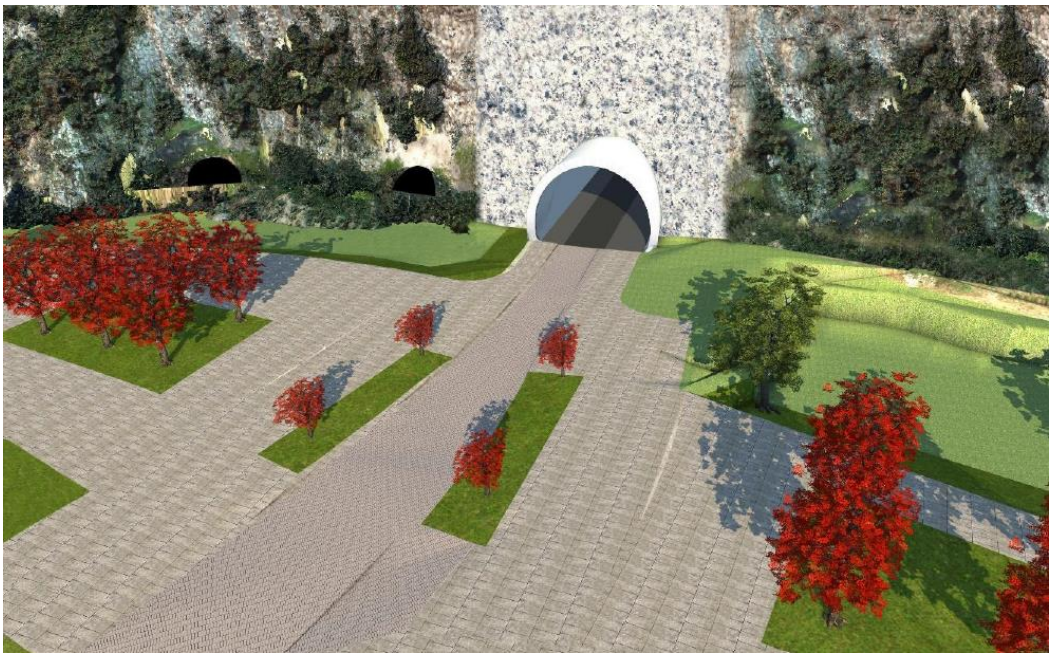


Figure 3.2 Eastern Portal – Source: Tony Gee, June 2021

Figure 3.3 Western Portal – Source: Tony Gee, June 2021

Figure 3.4 Western Portal & Haulage Tunnels – Source: Tony Gee, June 2021

3.3 Landscaping and Trees

3.3.1 The proposed landscaping strategy aims to reduce vegetation loss wherever possible. The strategy includes the introduction of trees, shrubs (ornamental planting), wildflower meadow seeding, climber planting and wetland / pond meadow seeding, as well as grassland enhancement areas and reedbed. The proposed planting scheme is designed to complement the native species and natural environment found in the vicinity, with the aim of blending seamlessly with the wider environment and promoting biodiversity on the site. The species mix for the ornamental shrub planting will be made up of Genista Lydia, Hebe 'Green Globe', Lavandula angustfolia 'Hidcote' and Santolina chamaecyparissus.

3.3.2 The Proposed Development scheme includes compensation mitigation by planting approximately 67 new trees, which includes 7 within the confines of the application site and 60 trees offsite within the wider Bluewater Shopping estate as part of BNG (10 in total at Area 12) and approximately 50 trees being planted around Lake 5. The Lake 5 proposals were agreed and discharged during the previous submission, albeit further enhancement for the wider area is proposed as part of this updated application submission.

3.3.3 The Proposed Development also involves the removal of the existing reed bed, owing to the proposed location and siting of the tunnel, which projects into this area on the western side of the chalk spine. However, the proposed landscaping strategy allows for one reed bed to be created within the confines of the red line boundary (to the north of the new road), as well as additional reed bed being provided within Bluewater as part of the BNG proposals. The proposed landscaping plans within the red line boundary can be found below in the figure below:

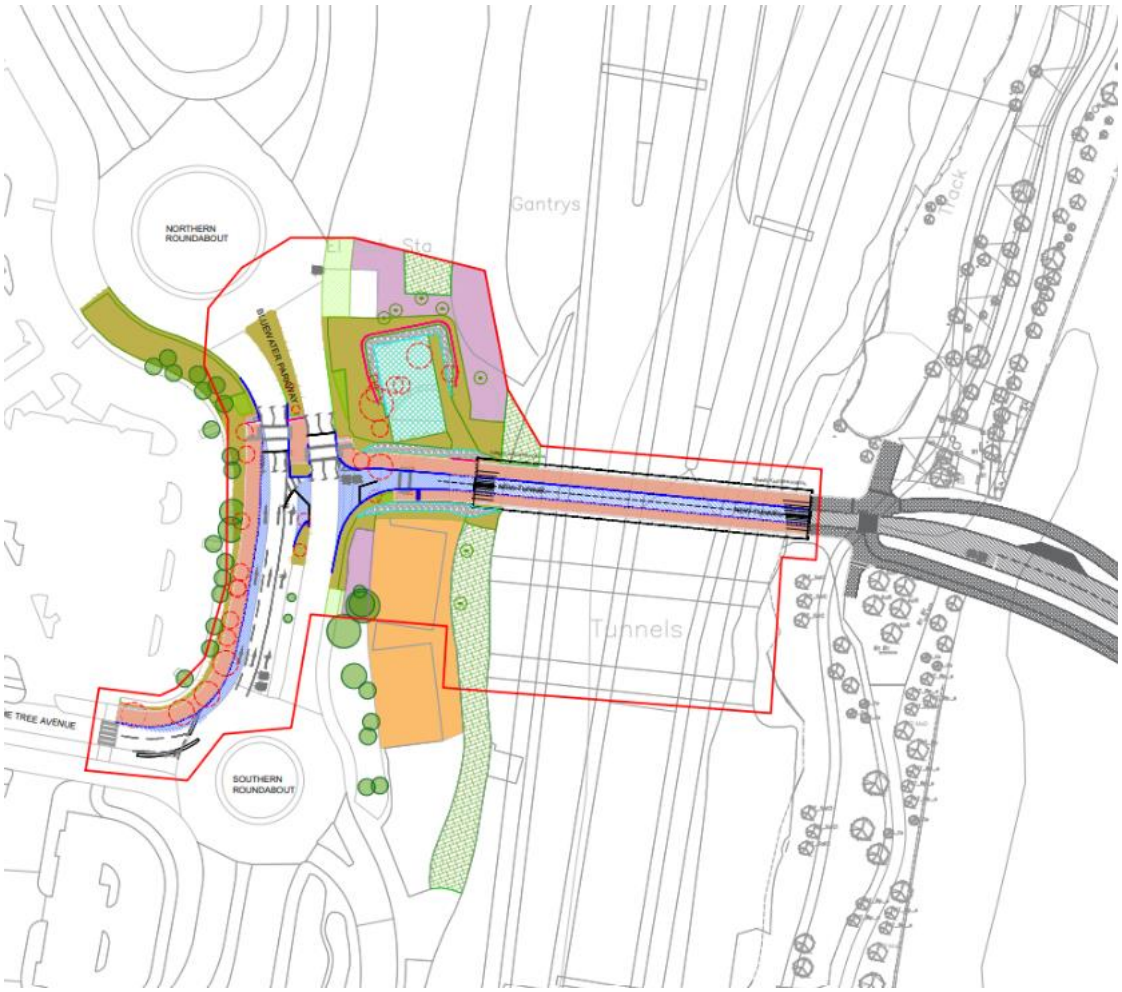


Figure 3.4 Landscaping Plan

3.4 Biodiversity Net Gain

3.4.1 The Proposed Development will deliver a 14.48% BNG, in line with the requirements of the Environment Act 2021 and local planning policy. While the overall strategy for the landscape design aims to maximise the inclusion of landscaping within the red line boundary, the limited space within the Application Site will unavoidably necessitate a significant amount of vegetation clearance. Therefore, opportunities for habitat creation and enhancements on offsite third-party land near the Proposed Development have been identified (within the Bluewater area), to enable the Proposed Development to achieve the mandatory net gain in biodiversity.

3.4.2 The Proposed Development will enhance existing habitats on Site and within the estate of Bluewater (specifically grassland). The gain is primarily made up of grassland enhancement areas, wildflower meadow and meadow seeding, shrub planting and tree planting. At Lake 4 (lake to the south), an area will be used to provide 0.047ha of reedbed creation in the form of installation of concrete beds. This will facilitate BNG and ensure we replace high distinctiveness habitat (reedbeds).

3.5 Lighting

3.5.1 The Proposed Development includes the introduction of lighting. This will be provided within the tunnel, as well as pedestrian lighting in the form of street lighting.

3.5.2 The key lighting elements designed for the tunnel and junction areas are carefully planned to enhance functionality and aesthetics. Ceiling-mounted functional lighting within the tunnel ensures visibility and safety for all users, as depicted below. Complementing this is the feature lighting, which casts a serene 'blue hue' on the soffit, adding a tranquil ambiance to the wider environment.

3.5.3 At the junctions, lighting columns provide essential illumination, ensuring that the area is well-lit for ease of navigation and security – aligned with the Bluewater lighting standards. These standards were also agreed with Natural England during discharge of Condition 17 given the notable protected species on site. The detail continues to apply as part of the submitted planning application.

3.5.4 The Proposed Development includes ample lighting, clear wayfinding signage, and well-defined lanes which can enhance the user experience and promote safety.

Source: ReLux – Lighting Strategy

3.6 Construction Site Compound

3.6.1 The proposed site construction compound areas are located on the eastern side of the Application Site, within Eastern Quarry, together with an additional construction compound area sited to the west within Bluewater. Whilst an appointed contactor is not yet commissioned, the temporary compound areas are likely to include various facilities and amenities to support construction activities. This is likely to include temporary site offices for project management and coordination, storage area for construction materials

and equipment, temporary fencing for security and demarcation, welfare facilities for workers such as restrooms and break areas, and potentially a small-scale parking area for construction machinery. The land will be restored following completion of works.

3.7 Proposed Benefits to the Scheme

3.7.1 As aforementioned, the Proposed Development forms part of the Fastrack rapid bus transit system which is one of the main infrastructure projects for Ebbsfleet Garden City. It seeks to contribute to the objective of a modal shift from private car to sustainable modes of travel, via public transport.

3.7.2 The Proposed Development plays an important role in the realisation of Ebbsfleet Garden City, as recognised by adopted planning policy. Specifically, the Proposed Development offers the following benefits:

- The scheme is strategically designed to provide direct access for Fastrack buses, pedestrians, and cyclists between the residential areas of Eastern Quarry, with an emphasis on enhancing connectivity to the western village Ebbsfleet Garden City and the Bluewater Shopping Centre. By introducing a direct tunnel route, it is anticipated that bus journeys will be expedited by approximately 3 minutes when compared to the current route that navigates through residential streets to reach the Limetree roundabout on Bean Road leading into Bluewater (reference from Jacobs Planning Statement).
- It is an important infrastructure component of the wider Kent Transport Strategy, which has been acknowledged in Planning Policy (more recently through the adoption of the Dartford Local Plan). This alignment ensures that the scheme contributes to a cohesive regional transportation plan.
- It aims to minimise any potential disruption to the existing drainage infrastructure of Bluewater, thereby safeguarding against any adverse environmental impacts.
- The design ensures that access is maintained for emergency vehicles while imposing restrictions on private vehicle usage, thereby prioritising safety and pedestrian serviceability.
- The ecological benefits are diverse and include the installation of bat and bird boxes within the northern and southern haulage tunnels, as well as felled trees being used to create hibernacula for reptiles and amphibians. Furthermore, the proposal provides additional reedbed creation, as well as scrub enhancement, tree planting all of which contribute positively to BNG objectives and achieving 14.48% BNG via a combination of on and offsite solutions.

4 Design Principles

4.1.1 The Proposed Development has been finalised in response to site surveys and the various assessments previously undertaken, along with best practice guidance for the development of infrastructure works, such as a bus tunnel.

4.2 Design, Scale and Appearance

4.2.1 The starting point for the design of the Proposed Development was to create an engineering solution that not only has regard to its location and surroundings but has a natural 'fit' within its setting in terms of its scale and appearance, recognising that a facility of this nature has an otherwise largely functional form and use, as discussed in the proceeding paragraphs. This was accepted during the determination of the previous planning application submission and approval made by KCC. An extract of the proposals taken from Jacobs' Planning Statement is depicted in Figure 4.1 below.

Figure 4.1 Visualisation of Western Portal – Source: Jacobs Planning Statement (November 2019)

4.2.2 The adopted design strategy is informed by careful consideration of scale and appearance, effectively minimising any potential adverse effects on the surrounding area. The design showcases a simple, functional bus tunnel that meets the operational requirements of Fastrack while blending harmoniously with the environment through its unobtrusive scale and the form of a portal hood. It is considered the design has no detrimental impacts on the cliff face on either side. It is further considered that due to its minimal projection, the Proposed Development has been successfully designed to minimise impacts on the landscape and visual aspects, given the limited development footprint required for the proposal.

4.2.3 Furthermore, given that the Proposed Development punctures through the chalk spine it will result in low visual harm had to the overall area. This approach has also been recognised by the KCC Officers during the review and approval of the former application.

4.2.4 The resubmitted application maintains the original tunnel location at the exit of Eastern Quarry and the

entrance to Bluewater. It seamlessly integrates with the existing highway networks and upcoming development on the Ebbsfleet side, aligning with KCC policy aspirations. The Proposed Development includes green spaces and detailed landscaping, creating an inviting space for all users, ensuring a pleasant journey for buses, cyclists, and pedestrians through the tunnel.

4.2.5 The design details cover internal and external lighting, carefully positioned to avoid visual intrusion and light spillage, considering the presence of bats on the site. The lighting plan includes functional ceiling-mounted and feature lighting in the tunnel, as well as functional lighting at the junction. This aligns with local and national planning policies while maintaining its functional purpose as a highway-engineered scheme. Further details on the proposed lighting are provided in later paragraphs of this Statement.

4.2.6 The choice of 'sensitive' colours used within the construction of the Proposed Development allows the tunnel and its associated structures integrate effectively with its surroundings, minimising visual impact. This design approach also prioritises ecological friendliness, ensuring that the tunnel contributes positively to the area. This includes within Tunnel 1 and 2, it is proposed that artificial roosting features will be installed prior to construction to provide compensatory roosting sites for bats potentially disturbed by the works undertaken in Tunnel 2. Tunnel 2 will also be provided with bat boxes, but only after the proposed development has entered its operational phase. Example artificial bat features include Schwegler Brick Box Type 25A or Schwegler Flat Bat Box 1FF.

4.2.7 The design principles embedded within the Proposed Development will enable the delivery of a purpose-built solution appropriate to this location as set and in line with Policies S1, M1 and M12 of the adopted Dartford Local Plan.

4.3 Layout

4.3.1 The layout of the Proposed Development has been strongly influenced by the site context, inclusive of the existing nearby land uses as well as surrounding development proposals. The tunnel is positioned along a generally east-to-west orientation, crossing the chalk spine. It links to the as-yet-undeveloped Fastrack spine road in the east with construction underway and connects to Bluewater Parkway in the west. The proposed signal systems will control entry and exit points at both ends of the tunnel.

4.3.2 The proposed spatial arrangement for the bus tunnel is designed with simplicity and efficiency in mind, featuring a direct, unobstructed road and path that facilitates smooth transit operations serving directly between both key strategic sites.

4.3.3 The spatial arrangement of the scheme elements are illustrated below:

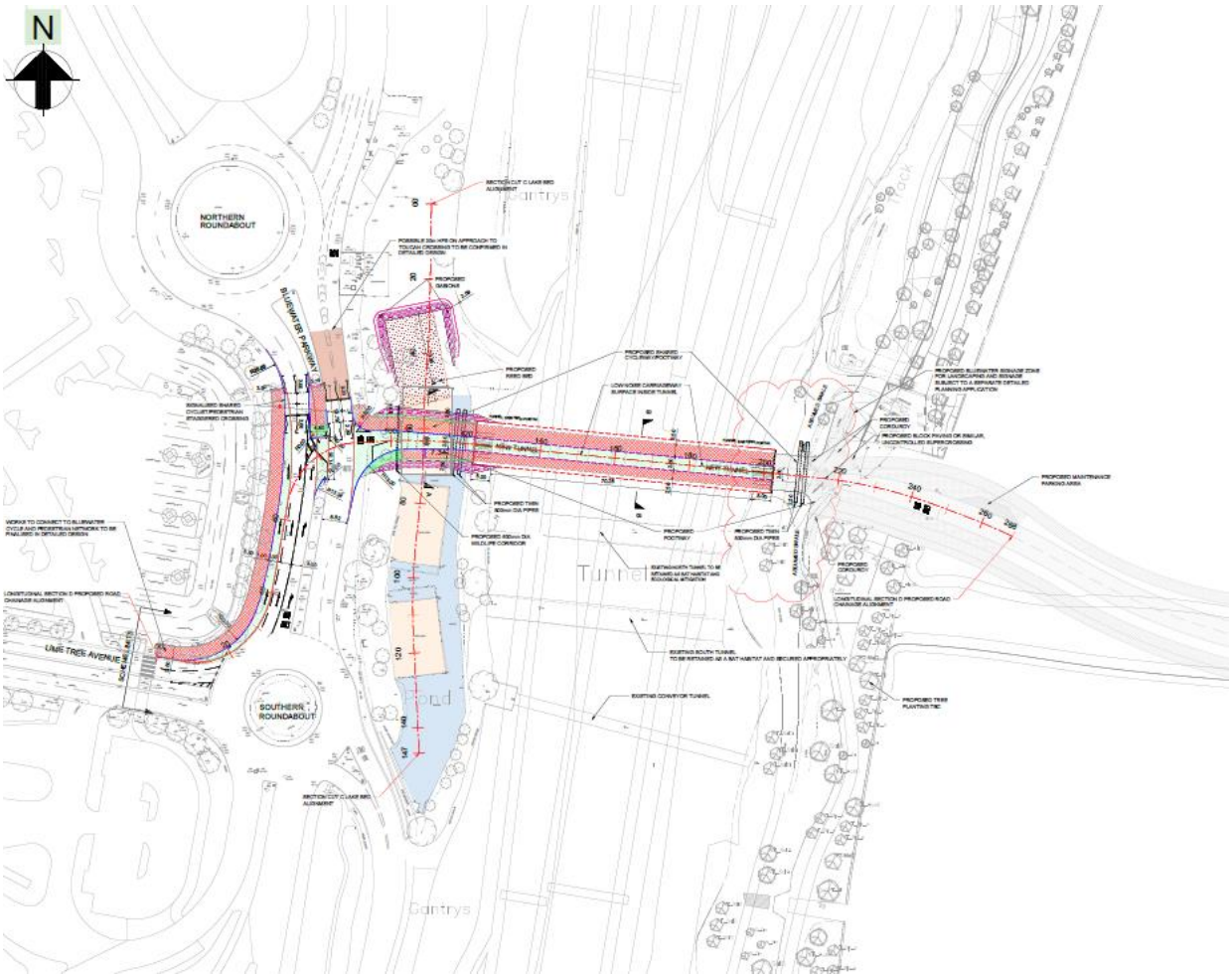


Figure 4.2: Proposed General Arrangement Plan

4.4 Access

4.4.1 Accessibility to Bluewater Shopping Centre and Whitecliff will be achieved because of the Proposed Development. The new bus tunnel presents a significant improvement in accessibility, offering a dedicated and efficient route for public transportation. Designed with inclusivity in mind, the tunnel accommodates buses in a way that ensures quick and easy access for all passengers, including cyclists and pedestrians through the straight / direct link between the chalk spine. The tunnel's integration into the existing transportation network demonstrates a clear commitment to the creation of a more connected and accessible community for everyone serving both Whitecliff/Ebbsfleet and Bluewater, thus aligning with the key strategic policies of KCC and Dartford and facilitating sustainable means of travel.

4.5 Conclusions

4.5.1 The adopted design and access principles deliver a tailored solution for sustainable travel well suited to this location and its connectivity to key strategic sites. The bus tunnel design integrates simple, functional forms to meet Fastrack's operational needs. Practical structural elements ensure seamless integration with Fastrack's service framework. External finishes and careful colour selection harmonise

with the surrounding environment, reflecting a considered approach to the tunnel's aesthetics while maintaining its primary function as a key transportation conduit, thereby reducing its overall impact on the surroundings. The proposals are therefore considered to create a sustainable travel solution, connecting to key strategic sites and therefore accords with Policies S1, M1, and M12 of the approved Dartford Local Plan.

5 Planning Policy Context

5.1.1 This Chapter sets out the relevant planning policy framework for the Proposed Development. The purpose of the Chapter is to summarise key policies that are pertinent to the determination of the application. The assessment focuses on the compliance of the proposed Development in relation to planning policy at a national and local level.

5.1.2 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that an application for planning permission should be determined in accordance with the Development Plan unless material considerations indicate otherwise.

5.1.3 The Development Plan material to the proposed Development is provided by the Dartford Local Plan to 2037 (adopted April 2024). Other material planning policy considerations include national planning practice guidance, in addition to Dartford's Supplementary Planning Guidance (SPG) and any relevant adopted Neighbourhood Plans.

5.1.4 At a national level, National Policy Framework (NPPF) (December 2023) provides relevant planning guidance at a national scale and sets out the Government's planning policies for England and how they are expected to be applied. The NPPF provides a framework for which development local plans can be produced and planning applications must be determined in accordance with the NPPF, unless material considerations indicate otherwise.

National Planning Policy Framework

5.1.5 The NPPF underwent revision in response to the Levelling-up and Regeneration Bill: reforms to national planning policy consultation on 19 December 2023. It delineates the government's planning policies for England and outlines the anticipated application of these policies.

5.1.6 The key sections of the NPPF of relevance to the Proposed Development are:

- Section 2 – Achieving sustainable development
- Section 4 – Decision-making
- Section 8 – Promoting health and safe communities
- Section 9 – Promoting sustainable transport
- Section 12 – Achieving well-designed and beautiful places
- Section 15 – Conserving and enhancing the natural environment

Local Planning Policy Context

5.1.7 The Darftford Plan to 2037 (adopted April 2024) constitutes the Development Plan for the County Borough Council. The Plan replaces all policies of the previous Dartford Core Strategy 2011 and Development Policies Plan 2017. The replacement plan provides the long-term Borough development strategy, including the part of Ebbsfleet Garden City within Dartford. It has been produced by Dartford Council with significant input by the EDC.

The Dartford Plan to 2037

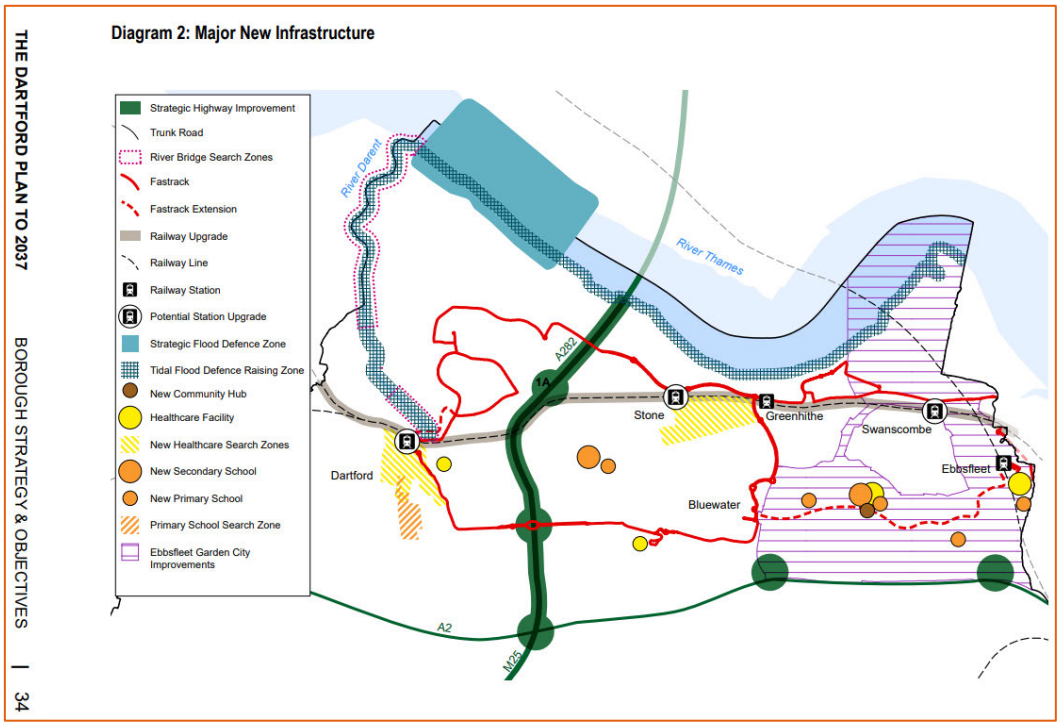
5.1.8 Notwithstanding the above, the adopted LDP contains the following policy framework for the consideration of development proposals which is of relevance to this application. This includes the following:

Policy S1 Borough Spatial Strategy

5.1.9 Aims to maximise regeneration benefits, promote sustainable patterns of development, and protect less appropriate areas from development. The policy focusses growth at priority locations at Central Dartford and Ebbsfleet Garden City, which will undergo regeneration with new infrastructure and mixed-use development. Furthermore, the strategic policy emphasises that new development will need to offer diverse uses, minimise private vehicle travel, and strategically locate growth in areas accessible by public transport and walking/cycling.

Policy S2 Infrastructure Planning Strategy

5.1.10 Highlights that development within the borough will follow planned phases to ensure efficient delivery of new infrastructure and stay within capacity limits. Essential services and facilities, as specified in Diagram 2 (as shown below), will be provided, with designated land areas within large developments reserved for community, transportation, food defences, and green infrastructure. It further goes onto state that opportunities for transport improvements will be maximised by enhancing rail services and train stations, improving bus services and routes to alleviate congestion in Fastrack routes, upgrading highways and junctions with additional investment as required, and utilising rivers for transporting goods and passengers in large-scale developments.



Source: Dartford Local Plan to 2037 (April 2024)

Policy S3 Climate Change Strategy

5.1.11 Encourages development in the Borough to be strategically planned and designed to address and adapt to climate change by reducing carbon emissions, promoting sustainable travel, and enhancing resilience. Priority will be given to sustainable modes of transportation such as walking, cycling, public transport, and low-carbon vehicles. Protection and enhancement of green and blue infrastructure will support biodiversity, reduce surface water runoff, and aim to achieve a net gain in biodiversity. Developments will be situated in areas with lower flood risk, incorporating flood risk mitigation measures and sustainable drainage systems. Emphasis will be placed on efficient use of natural resources, waste management, integration of energy-efficient designs, renewable energy sources, and adaptable sustainable technologies.

Policy E1 Ebbsfleet and Swanscombe Strategy Summary

5.1.12 Emphasises that a modern garden city will be established at Ebbsfleet, integrating high-quality greenspace, infrastructure, homes, and business investment while focusing on climate resilience. Sustainable transport will be coordinated, and mixed-use neighbourhoods will be well-designed to include workplaces, schools, health facilities, and recreational areas. Emphasis will be on walking, cycling, public transport, and low-carbon vehicles, adaptable to future technology. Key initiatives include creating an urban centre around Ebbsfleet International Station, developing new neighbourhoods at Alkerden and Ashmere, completing projects at Ebbsfleet Green, Castle Hill, and northwest Swanscombe, and potential expansion north of London Road, Swanscombe. Environmental enhancements and improved walking and cycling connections at Bean Triangle will align with Green Belt principles.

Policy E5 Alkerden and Ashmere Allocation

5.1.13 Aims to create sustainable, active, and integrated neighbourhoods within significant green infrastructure. The policy supports the completion of mixed-use centres and infrastructure in line with strategic Garden City development, emphasising the provision of diverse residential neighbourhoods and community facilities. Key aspects of the policy include the establishment of Fastrack routes, mixed residential neighbourhoods with centres and services, custom/self-build dwellings, pedestrian and cycle networks, greenspaces, and the delivery of dwellings, specialist accommodation, and community uses within designated areas.

Policy M1 Good Design for Dartford

5.1.14 The policy requires new development to align with the National Design Guide, National Model Design Code, Kent Design principles, and specific local design criteria. It emphasises responding to positive aspects of the locality, respecting heritage assets, creating a sense of place, promoting connectivity, integrating with the public realm, and meeting local design guidelines. Additionally, development must adhere to height, mass, form, orientation, and landscaping criteria relative to the surroundings, support a sense of place, and encourage outstanding design. The policy also focuses on achieving suitable scale and density through a design-led process, considering the site's context, characteristics, green quality developments, mix of uses, and efficient land use for regeneration. Public spaces and signage must be inclusive, safe, accessible, and sympathetic to the building and locality, enhancing visual amenity and public safety.

Policy M2: Environmental and Amenity Protection

5.1.15 Requires development to be designed and situated to avoid unacceptable impacts on neighbouring uses, the Borough's environment, and public health. Emphasis is placed on mitigating impacts in sensitive areas, addressing air quality concerns, protecting water quality, managing land use intensity, addressing anti-social behaviour, and considering factors such as traffic, noise, odour, light pollution, privacy, and land stability

Policy M3 Sustainable Technology, Construction and Performance

5.1.16 Highlights that development design and construction should tackle climate change by minimising carbon emissions, enhancing energy efficiency, and preserving water resources. Applicants are required to showcase their commitment to utilising established assessment tools and quality standards to meet these objectives.

Policy M4 Flood Risk and Riverside Design

5.1.17 Emphasises that developments along the Rivers Thames or Darent to enhance riparian landscapes, biodiversity, pedestrian and cyclist access, and river-based recreation opportunities while addressing flood defence infrastructure needs. Development within tidal flood defence zones must not hinder future flood defence management and should align with the Thames Estuary 2100 Plan. Planning permission will be granted only if the site is safe from flooding, does not exacerbate flood risks elsewhere, and complies with national flood risk policies including the sequential and exception tests, flood risk reduction measures, safe access, and flood protection measures.

Policy M5 Designated Heritage Assets

5.1.18 Specifies that the preservation of heritage assets, which are irreplaceable, is essential and must be done appropriately. Any potential harm or loss must be strongly justified. When assessing planning applications, the significance of the asset, the advantages of preserving or enhancing it, and identifying viable uses are crucial factors. Significant harm or complete loss is permissible only if the substantial public benefits outweigh the impact. Lesser harm will be weighed against public benefits. Specific regulations govern listed buildings, conservation areas, scheduled monuments, and geoarchaeological sites to ensure their protection and improvement. Demolition in conservation areas is permitted only if it does not compromise the area's character and redevelopment plans are guaranteed.

Policy M13 Green and Blue Infrastructure and Open Space and Environment

5.1.19 Sites smaller than 2ha will be assessed individually for a proportional contribution. This contribution should involve multi-functional land that allows for formal and informal recreation, provides habitats and corridors for wildlife, native trees/landscaping, and includes measures to mitigate and adapt to the impacts of climate change. Additionally, it is essential to demonstrate ongoing maintenance and management of these areas.

Policy M14 Biodiversity and Landscape

5.1.20 Development on sites of biodiversity importance will only be permitted if it can be demonstrated that biodiversity will remain unharmed. Projects near designated sites, priority habitats, or species must exhibit no adverse effects on biodiversity or ecological connections. Furthermore, the policy highlights that developments are required to safeguard and improve biodiversity. If current habitats are negatively impacted, compensatory habitats of similar type, size, and quality must be established nearby. New regulations now enforce a minimum 10% biodiversity net gain for relevant projects. This can be

accomplished by enhancing existing habitats or creating new ones on or off-site, particularly in Biodiversity Opportunity Areas or through county-wide initiatives. Developers must first show that on-site mitigation is infeasible before considering off-site biodiversity compensation. DEFRA's latest metric will be used to measure BNG, with habitats secured for at least 30 years.

5.1.21 All new developments should harmonise with their surroundings. Major projects must feature an aesthetically pleasing landscaping plan that boosts biodiversity, utilises native species, integrates sustainable drainage, and aids in climate change resilience. This involves planting new trees and landscape elements to create appealing streetscapes, provide natural shading, select species that mitigate air pollution, and ensure the long-term care of landscape and biodiversity elements.

5.1.22 Proposals for development should strive to retain existing tree cover, hedgerows, and landscape features whenever possible. If retention is not viable and removal is justified, replacement should involve native tree species or landscape features that mirror the maturity, canopy coverage, and location of those being replaced. This guideline applies to all development work, including activities affecting trees under a Tree Preservation Order.

Policy M15 Travel Management

5.1.23 Development must be carefully situated and designed to reduce and manage transportation impacts, including providing appropriate vehicle access and promoting active and sustainable travel options. Any residual impacts on the road network after implementing on-site mitigations should be addressed through off-site transport measures. Projects leading to serious road congestion, air quality concerns, safety hazards, or excessive on-street parking pressures will not be approved. Major developments should incorporate Fastrack, bus, and taxi routes to ensure efficient connections to community amenities and employment opportunities. Large-scale projects must facilitate Fastrack and bus service expansions as required. Land designated for potential rail connectivity between Abbey Wood and Ebbsfleet International will be safeguarded, with development that could compromise this connectivity not allowed. Significant rail infrastructure initiatives will trigger a review of the Local Plan to optimise sustainable revitalisation and transportation integration, enhancing stations to accommodate all modes of public and active transport.

Policy M16 Active Travel, Access and Parking

5.1.24 Requests that development should encourage walking, cycling, and public transport by offering appealing, well-planned, and secure routes, including segregated cycle paths where feasible, in line with the Manual for Streets guidelines. Large-scale regeneration projects may require tailored transportation solutions. Transport evaluations and travel plans, mandatory for developments with significant transport effects, should adhere to Kent County Council's recommendations. These travel plans should advocate for active travel and public transport, incorporate clear strategies and continual monitoring, and remain flexible over time. Projects must reduce negative travel impacts on the environment and community, ensuring appropriate access, highway capacity, traffic flow, and visual aesthetics. Access to footpaths and cycle lanes should be safe and convenient, public rights of way protected, and cyclist amenities such as secure parking and showers provided. Design elements catering to individuals with mobility and sensory challenges, particularly at critical locations like road crossings and public transport stops, must be integrated.

Policy M21 Bluewater

5.1.25 Makes regard to that support will be extended for the advancement and progression of Bluewater as a

contemporary regional hub, if it upholds its economic significance, quality, uniqueness, and meets specific criteria. Approval for developments related to Use Classes C1, E, and F will be granted if they enhance Bluewater's performance without compromising its purpose, reduce traffic impact, and enhance access to public and active transportation. Proposals are required to preserve the original design integrity and parkland ambiance of the centre. Retail or leisure projects must align with Bluewater's function, offer distinctive experiences, undergo impact assessments and sequential testing. Residential development at Chestnut Avenue East will be permitted if it integrates harmoniously with neighbouring communities, ensures safe access, fosters a vibrant street environment, provides sufficient parking, and complies with Local Plan regulations.

6 Planning Assessment

6.1.1 This Chapter appraises the Proposed Development having regard to recently adopted LDP policies as well other material considerations, including national planning policy contained within NPPF.

6.1.2 The proposal remains largely unchanged, with nominal updates as outlined in the introductory paragraphs of this Statement, together with the recent adoption of the Dartford Local Plan to 2037 (April 2024). For completeness and continuity, the continuing paragraphs provide a detailed overview of the technical assessments, as well as a planning assessment against the updated planning policy requirements, as well as those nominal updates to the Proposed Scheme.

6.2 Principle of Development

6.2.1 As was previously considered under the Previous Application (application ref: DA/19/1549 (KCC/DA/0232/2019)), as well as the previous paradigms of local planning policy, policy support exists for establishing a direct connection between the developed residential area in Eastern Quarry (currently under construction) and Bluewater Shopping Area. The primary objective of Fastrack is to optimise travel possibilities within Kent Thameside through public transportation, adopting a deliberate and important shift away from reliance on cars. This importance is recognised under the requirements of Policy S1: Borough Spatial Strategy as depicted in Figure 6.1 below.

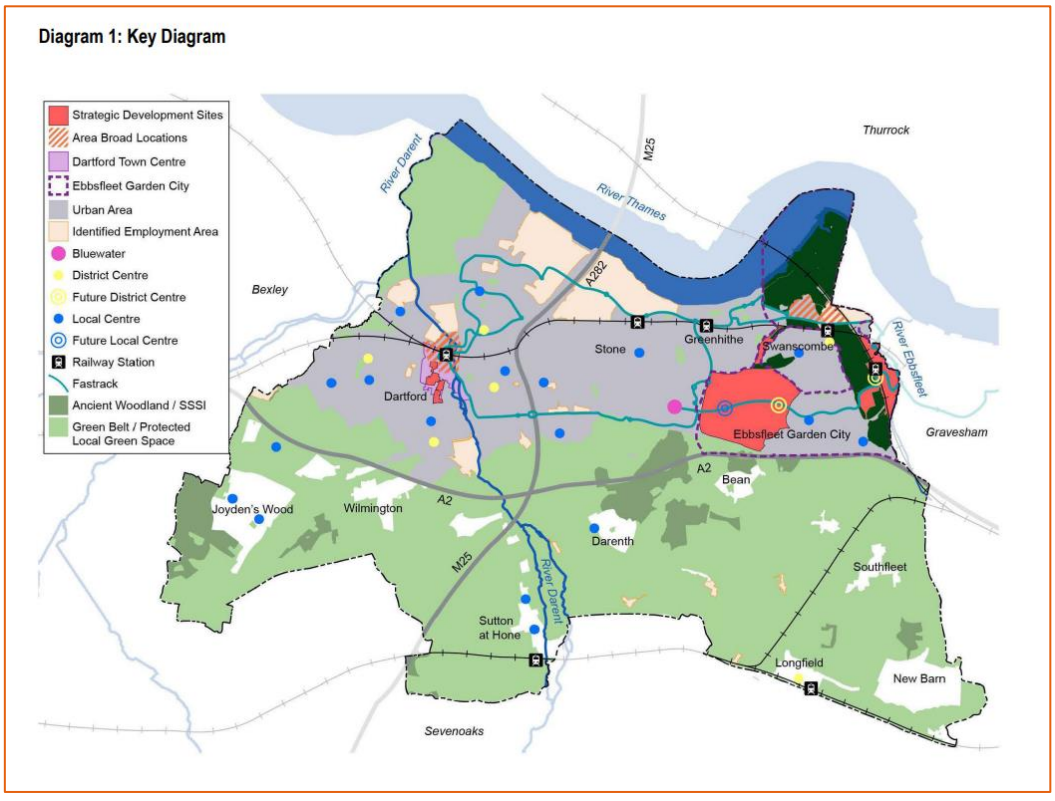


Figure 6.1: Source: Dartford Local Plan to 2037 (April 2024)

6.2.2 In addition to the above, under the provisions of Policy E5: Alkerden and Ashmere Allocation, of the recent adoption of the Local Plan, it states:

'1. Alkerden and Ashmere will form sustainable, active and well-integrated neighbourhoods set in significant green infrastructure. The fulfilment of strategic Garden City development by prompt completion of mixed-use centres and infrastructure will be supported, complemented by new diverse residential neighbourhoods.

2. Proposals should be designed to deliver:

a. A direct Fastrack route between Bluewater and Ebbsfleet Central;'

6.2.3 Further support for the proposal is found under the stipulations of Policy 15: Managing Transport Demand, it states that:

1. In order to reduce the need to travel, minimise car use and make the most effective use of the transport network, the Council will, inter alia:

- *b) Require major development sites to make provision for Fastrack as part of planning proposals. In addition to provision on identified sites, extension or improvement of the network will also be considered on major sites, where potential demand from the development justifies it and where this would benefit the wider network;*
- *c) Work in partnership with Kent County Council, other partners and transport operators to deliver appropriate long term operating arrangements to ensure the success of Fastrack and ensure that the benefits of Fastrack, where embedded in existing communities, are not lost.*

6.2.4 As evident above, the Proposed Development is considered a priority for Kent, as it aims to provide highway capacity, promote modal shift through enhanced public transport facilities and enhance connectivity between the two key strategic sites. This policy support caters to the requirements of Fastrack, as well as facilitating sustainable links for pedestrians and cyclists, as embedded in the Policies S1 E5, and M15 of the recently adopted Local Plan. Moreover, this need is articulated for the planned tunnel under Bean Road, aligning with the vision of establishing a direct Fastrack bus route to optimise travel times and improve accessibility to the new development in Ebbsfleet. The inclusion of a footway/cycleway connection aligns with not only Local Plan objectives, but also sentiments set by national guidance which promotes integrated developments and facilitating access to services to discourage car usage.

6.2.5 In addition to the above, during the consultation of the former application, EDC expressed and continue to express appreciation for the Proposed Development, anticipating its positive impact on public transport, pedestrian, and cycling movements. This aligns with the envisioned strategic connections outlined in the Eastern Quarry development site's outline planning consent under ref (DA/12/01451/EQVAR).

6.2.6 Considering the above, the Proposed Development continues to comply with the overall objectives of delivering a bus tunnels and thus accords with updated policies and the infrastructure requirements under the provisions of Policies S1, E5 and M1. The Proposed Development is an important transport scheme that facilitates sustainable travel. As previously concluded by KCC, the principle of the Proposed Development is therefore considered to be acceptable and is established.

6.2.7 Issues relating to the impacts of the Proposed Development in terms of landscape, accessibility, noise, biodiversity, lighting, flood risk matters are considered against other plan policies below.

6.3 Highways and Sustainable Travel

6.3.1 NPPF Paragraph 109 emphasises that 'the *planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making'*.

6.3.2 In addition to the above, at Paragraph 116(a) of the NPPF it states that applications for development should, among other things, give priority so far as possible *"to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use."*

6.3.3 The Proposed Development, which constitutes a bus tunnel, is a significant advancement in promoting sustainable travel within the area. By providing a dedicated route for public transport, aligning with the requirements set by local policy provisions, it encourages a shift away from car dependency towards more environmentally friendly modes of travel.

6.3.4 The Proposed Development is a key component in facilitating a seamless and efficient public transport network, which is essential for sustainable urban development, as recognised not only by local planning policy but also national guidance. It supports the reduction of traffic congestion and pollution, as well as enhancing the accessibility of public transport as a viable alternative for daily commutes between the two key priority sites. The implementation of such infrastructure demonstrates a commitment to sustainable travel and a forward-thinking approach to addressing the challenges of modern transportation and promoting sustainable transport.

6.3.5 The Proposed Development will create and improve public transport infrastructure opportunities and encourage public transport use, in line with NPPF Paragraphs 109, 116 and local planning Policies S1, S5, E5 and M15 of the adopted Development Plan.

6.4 Air Quality

6.4.1 An Air Quality Dust Assessment prepared by Jacobs has been resubmitted with the planning application, together with a supporting and updated technical note prepared by Arcadis. The note has been updated in line with the recent updates to the guidance on the Assessment of Dust from Demolition and Construction v2.2 as of January 2024.

6.4.2 The updated technical note highlights the following findings:

- *The new assessment guidelines maintain a low risk for Earthworks and Construction impacts. However, the risk for Trackout has increased from negligible to medium due to higher dust emissions and the proximity of sensitive receptors near the Ashmere housing development.*
- *The risk for uncontrolled dust effects from the development has been revised from low to medium. Consequently, the mitigation measures required to prevent significant local air quality impacts have been updated.*
- *Medium risk mitigation strategies are now advised for the development, except for certain earthworks and construction activities which can continue with low-risk measures.*

6.4.3 The assessment concludes that the Proposed Development carries a minimal risk of adverse effects on human health and dust soiling. Nevertheless, to adhere to best practices, it is recommended to implement mitigation measures typically recommended for Low-risk sites during the construction phase of this scheme. These measures will be detailed in the Construction Environmental Management Plan (CEMP), which will form part of any forthcoming planning condition imposed to the planning consent.

6.4.4 Based on the technical information provided with the application submission, as well as the attachment of a forthcoming planning condition, the Proposed Development is considered to meet the requirements of Policy M2 of the adopted LDP.

6.5 Biodiversity

6.5.1 NPPF Paragraph 186 states that *'When determining planning applications, local planning authorities should apply the following principles:*

(a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

(b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

(c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

(d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'

6.5.2 Policy MD13 Sites smaller than 2ha will be assessed individually for a proportional contribution. This contribution should involve multi-functional land that allows for formal and informal recreation, provides habitats and corridors for wildlife, native trees/landscaping, and includes measures to mitigate and adapt to the impacts of climate change. Additionally, it is essential to demonstrate ongoing maintenance and management of these areas.

6.5.3 In addition to the above, Policy MD14 requires that a minimum 10% biodiversity net gain must be provided for relevant projects. This can be accomplished by enhancing existing habitats or creating new ones on or off-site, particularly in BOA areas, to which the application site is located within.

6.5.4 The application is supported by an Ecological Impact Assessment (EcIA) (Bat Hibernation Survey Report Appended), a Method Statement covering Reptile and Dormouse Precautionary Method Statement, as well as Bat Hibernation Report and BNG Report, Plan, Metric and Baseline Habitat Figure & Proposed / Post Construction Habitats Figure.

6.5.5 The comprehensive surveys accompanying this application are summarised below. The following ecological features are either known or have the potential to be on site and are set to be impacted by proposed works. These features require mitigation and compensation to negate any significant effects from construction and/or operation, as set out in the proceeding paragraphs.

Habitats

6.5.6 Reedbed is a Habitats of Principal Importance in England (HPIE), is present within the site and due for partial clearance. Without direct compensation for loss of this high distinctiveness habitat there is a risk that the development would be unable to achieve BNG. Further, without additional reedbed planting, water treatment effectiveness will be reduced in lieu of additional traffic using the area.

6.5.7 In terms of mitigation, as this habitat constitutes as a high distinctiveness habitat within the BNG metric, habitat creation proposals have been provided to ensure no net loss to biodiversity and that trading rules for the loss of this habitat are satisfied. The provision of additional reedbed planting within the area will also support multiple species that rely on the habitat and increase effectiveness of water treatment capability.

Invasive non-native plant species

6.5.8 An area of Small-leaved Cotoneaster was recorded adjacent to the western portal entrance and will be cleared within the proposals. In the absence of mitigation, the works have the potential to spread this species during construction, resulting in potential establishment during the operational phase.

6.5.9 The reports conclude that by means of mitigation on invasive non-species plant, the small-leaved Cotoneaster will need to be removed by a specialist contractor following the Method Statement (10044832-ARC-00-ZZ-RP-EC-0010-01-MS) and the Construction Environmental Management Plan (CEMP) for the proposed development.

Other amphibians

6.5.10 Common frog, toad, smooth newt have been recorded within the site. There is potential for these species to breed, forage and hibernate within habitats on site due for partial removal. In the absence of mitigation, the works have the potential to negatively impact these species.

6.5.11 Sensitive clearance of habitats suitable for supporting other amphibians should be undertaken following the Method Statement (10044832-ARC-00-ZZ-RP-EC-0010-01-MS) and under ecological oversight. A monitored, three-stage approach to vegetation removal is recommended which diminishes the suitability of the works area to encourage the movement of amphibians to other nearby suitable habitats.

Reptiles

6.5.12 Slow worm and common lizard have been recorded approximately 250 m form the site and grass snake has been recorded within the site within habitat due for removal. In the absence of mitigation, the works have the potential to negatively impact these species.

6.5.13 Mitigation - Sensitive clearance of habitats suitable for supporting reptiles should be undertaken following the Method Statement (10044832-ARC-00-ZZ-RP-EC-0010-01-MS) and under ecological oversight. Given the low numbers of reptiles recorded from the desk study and previous surveys, a

monitored, three-stage approach to vegetation removal is recommended. This approach diminishes the suitability of the works area to encourage the movement of reptiles to other nearby suitable habitats. It is also recommended that at least one artificial hibernation site (hibernacula) is created before the autumn. The felled trees will be used as log piles to provide habitat for reptiles using the site until planting develops. This feature will benefit reptiles and amphibians.

Birds

6.5.14 The areas of scrub, woodland and reedbed present on site are considered likely to support nesting birds. Vegetation clearance on site will reduce nesting and foraging habitat for birds and has the potential to negatively impact bird species in the absence of appropriate mitigation.

6.5.15 If vegetation clearance works are required within the main nesting season, then a nesting bird check should be undertaken by an ecologist no more than 48 hours prior to the works being undertaken (preferably within 24 hours). If an active nest is found during the check, the ecologist will advise on establishing an exclusion zone around the nest. This must remain in situ until the chicks within the nest have fledged. The procedure has been detailed in Method Statement (10044832-ARC-00-ZZ-RP-EC-0010-01-MS) will be incorporated into the CEMP.

Bats

6.5.16 A total of two disused tunnels are present on site, and an additional tunnel is also present located 30 m south of the site. Swarming surveys undertaken in 2018 by Arup identified low numbers of common pipistrelle, Daubenton's bats and brown-long eared bats using Tunnel 1 and Tunnel 2 as a swarming site. Tunnel 1 was identified as supporting hibernating common pipistrelle and concluded Tunnel 2 could be used by hibernating bats. The surveys also recorded summer roosting in Tunnel 1 for common pipistrelles, and soprano pipistrelles, and Tunnels 1 and 2 for brown long-eared bat. No Maternity roosts were identified on site during these surveys.

6.5.17 Updated bat surveys were undertaken in 2023/2024, comprising swarming, hibernation, and emergence surveys. Although no swarming occurred whilst surveyors were recording on site, static bat detectors located outside Tunnel 1 and 2 identified large amounts of common pipistrelle activity over short periods and therefore possible for swarming pipistrelle bats. The surveys confirmed all three tunnels being used by hibernating bats. Tunnel 1 recorded the greatest number hibernation bats with 4 species including common pipistrelle, soprano pipistrelle, brown long-eared bat, and Natterer's bat. Tunnel 2 recorded two species of hibernating bat, whereas Tunnel 3 recorded a single hibernating Natterer's bat. Brown long-eared bats were recorded using Tunnel 1 as a summer roost, with other species including common pipistrelle, brown long-eared bat and myotis bats (likely Daubenton's bat) using the tunnel for forage and pass through. No bats were observed emerging from Tunnels 2 or 3.

6.5.18 The surveys suggest that the works will not result in the direct loss of roosting features, a mitigation licence may be required due to the potential disturbance of hibernating bats within the tunnels. As part of the licence application, a comprehensive mitigation plan to minimise potential adverse impacts on bats has been provided to include mitigation and compensation measures for noise/vibration, lighting, and night working.

Hazel dormouse

6.5.19 Hazel dormouse is known to be present in woodland on the cliffs approximately 400 m south of the site.

Connectivity to the site is limited, however there is a thin strip of scrub with trees between the cliff face and Kent Fastway which could serve as a connecting route to site. However, is unlikely to be used by hazel dormouse and is therefore considered that the site is fragmented and isolated from the woodland with hazel dormouse. Although highly unlikely to be present on site, a precautionary Method Statement will be utilised for vegetation clearance for legal compliance.

6.5.20 In terms means of mitigation measures, a Method Statement for vegetation clearance has been produced to ensure the works avoid potential incidental injury or killing of dormice (10044832-ARC-00-ZZ-RP-EC-0010-01-MS). All vegetation clearance works will be undertaken under the supervision of a suitability qualified ecologist. The mitigation strategy comprises the following key elements:

- Vegetation clearance to take place outside of the hibernation (April to September) to avoid disturbing hibernating animals,
- Finger-tip searches of scrub and lower parts of the tree canopy will be carried out by a suitably qualified ecologist before any vegetation clearance takes place,
- In the event that a hazel dormouse nest or a hazel dormouse is discovered the works will need to cease immediately and advice to be sought from the ecologist who will determine the appropriate approach.

Biodiversity Net Gain

6.5.21 The landscape design has been focussed on maximising the landscaping within the application Site while minimising vegetation loss. Due to the limited space within the confines of the application site, a significant amount of vegetation clearance is unavoidable. Efforts have been made to enhance biodiversity and visual quality whenever possible. New plantings are proposed to replace any vegetation loss and mitigate visual impacts.

6.5.22 The Proposed Development achieves a 14.48% net gain, aligning with the Environment Act 2021 and local planning regulations. Despite efforts to maximise landscaping within the Application Site, the constraints of the application site have created and provided off-site enhancements within the confines of the Bluewater Shopping Centre site to reach the 10% gain, which the proposal exceeds. The proposed enhancement features across the application site as well as parcels across the Bluewater land includes the following:

- Habitats on site include modified grassland, broadleaved woodland, reedbed, mixed scrub, inland rock, ruderal, individual trees, and developed land. The habitat baseline for areas for proposed off-site habitat creation and enhancement include lake, modified grassland, and bare ground. Using the Statutory Biodiversity Metric at baseline both on-site and off-site equates to 4.94 habitat biodiversity units.
- Mitigation for affected habitats, including the habitat of principal importance reedbed, across the site will be addressed by ensuring that an overall net-gain (minimum 10%+) in biodiversity units is achieved, and trading rules for the loss of high distinctiveness habitat are satisfied.
- The onsite strategy to achieve BNG primarily focusses on reedbed creation, scrub enhancement, tree planting, and grassland creation. The off-site strategy is based around the creation of reedbed, grassland enhancement and scrub creation within Bluewater site which is designated as a Dartford BOA and supports biodiversity targets within The Dartford Plan.
- Through habitat retention, creation and enhancement within the site and off-site, a total net change of 14.48% habitat units has been achieved. Onsite net change will result in an onsite net gain of 0.08% compared to baseline, whereas off-site net change will result in 192.30% in habitat units compared to baseline. Trading rules are satisfied for all distinctiveness habitat groups.

6.5.23 In accordance with local planning policy, the proposed scheme will not cause any significant loss of habitats or populations of species, locally or nationally and provides a series of habitats in order to reach the 10% gain in line with the provisions of the Environment Act 2021. The Site does not encompass any statutory or non-statutory biodiversity designations, it is also located within a BOA which provides betterment to the proposals. Subject to the implementation of the mitigation set out above, no significant effects on ecology and biodiversity are anticipated for the construction and operational phases of the Proposed Development in compliance with the requirements set out by Policies MD13 and M14 of the adopted LDP, as well of provisions of the NPPF.

6.6 Landscaping

6.6.1 NPPF Paragraph 180 states that *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'

6.6.2 The proposed landscaping strategy aims to reduce vegetation loss wherever possible. The strategy includes the introduction of trees, shrubs (ornamental planting), wildflower meadow seeding, climber planting and wetland / pond meadow seeding, as well as grassland enhancement areas and reedbed. In addition to the above, the proposals also provides 67 No. trees (including Crataegus monogyana, Alnus glutinosa, Acer campestr, Quercus robur and Betula pendula), which will be planted around the perimeter of the site, together additional planting and further enhancement across the Bluewater Shopping Estate. Whilst it is accepted that the proposal will be visible from wider viewpoints, this is considered to be minimal and the existing vegetation and proposed planting strategy would serve to strengthen existing landscape characteristics, limit visibility of the Proposed Development, and integrate the proposals with the surrounding landscape and views, whilst also being located within a BOA.

6.6.3 Furthermore, the scale of the Proposed Development has been limited to that which is functionally necessary for the operation of a bus tunnel. The proposed planting scheme is designed to complement the native species and natural environment found in the vicinity, with the aim of blending seamlessly with the wider environment and promoting biodiversity on the site.

6.6.4 The details have been further enhanced since the previous approval and in line with the details of the discharge of condition application (Condition 14). The comprehensive landscape strategy plays a key role in enhancing the aesthetic appeal of the proposals, biodiversity interests, and overall sustainability of the project. By incorporating various elements such as tree planting, green spaces, water features, and native vegetation, the landscape strategy contributes to environmental conservation and ecosystem

health at the site.

6.6.5 The comprehensive implementation of the strategy ensures that the project integrates seamlessly with its surroundings, enhances the well-being of this key strategic site, and fosters a sense of connection with the application site and its surrounds such as the Bluewater Estate, as well as the residential development at Whitecliff. As such, the proposal accords with the requirements of Policy MD14 and the guidance set out in the NPPF.

6.7 Flood Risk and Drainage Strategy

6.7.1 The Environment Agency's (EA) Flood Map confirms that the application site is located within Flood Zone 1 (i.e. areas considered to be at little or no risk of fluvial or coastal/tidal flooding). Considering the location of the Application Site, no detailed flood risk assessment has been previously or currently been considered because of the proposals, given it is situated in an area with the lowest probability of flooding.

6.7.2 A Surface Water Drainage Strategy has been resubmitted as part of the application, originally discharged under the requirements of Condition 6 (App Ref: DA/19/1549). This demonstrates how surface water runoff from the Proposed Development would be managed sustainably, ensuring that flood risk is not increased on or off-site through an increase in surface water runoff.

6.7.3 The existing drainage networks at Bluewater Parkway and Lime tree Avenue are maintained, offering three-tiered surface runoff treatment, this is via gullies for silt/rubbish, interceptors for oil/petrol, and reed beds for water quality enhancement. Carpark runoff will be redirected to a new reed bed, created because of the proposals. The design will not alter the network before the outfall. New impermeable areas create negligible additional runoff, not overloading the current systems. The drainage network is designed to handle up to a 1 in 100-year event plus 40% for climate change, allowing for flooding only if it does not impact properties and is directed to Sustainable Drainage Systems.

6.7.4 The tunnel's design includes a vertical intersection point 20m east of the portal, with two double gullies to manage runoff from the Eastern Quarry site. Consequently, surface water entry into the tunnel is expected only from vehicle tires, with no groundwater seepage anticipated. Therefore, no specific drainage system is required inside the tunnel. Any water present will naturally flow westward into the Bluewater system. Additionally, the existing reed bed will be replaced by a new one to the north of the access link, mirroring the old design to ensure consistent treatment levels for runoff. The new design will mirror the existing bed, ensuring the same level of treatment for the carpark's runoff is preserved.

6.7.5 Iin light of the above matters, the drainage strategy has been resubmitted as part of the proposals (Document Ref: BRT-TG-XX-ZZ-TN-DD-0501), as previously approved under discharge of condition application ref: DA/19/1549. The technical details have not changed since the approved scheme and therefore is considered acceptable from a flood risk and drainage perspective. These measures are considered acceptable, in compliance with Policy M4 of the adopted LDP.

6.8 Waste Management

6.8.1 The Proposed Development is anticipated to generate waste during the tunnelling process, with an approximate volume of 6000m2 of excavation waste derived from construction activities. There is an

expectation that the waste, free from contamination, would be utilised as fill material within the Eastern Quarry and transported to the Eastern Quarry recycling compound. No removals off-site are foreseen, except through the Eastern Quarry. Construction methodology and disposal can be secured by way of Planning Condition via the CEMP once the appointed contractor for the proposed works is commissioned.

6.9 Ground Contamination and Archaeology

6.9.1 As was previously considered and assessed during the 2019 application, it is anticipated that no contamination will be found on the site, despite the site being location in an Area of Archaeological Potential. This conclusion was derived from the fact that the Bluewater development in the 1990s led to the clearance of the western part of the site, while the eastern section had previously functioned as a quarry for extraction activities. There were no processing activities conducted in the immediate vicinity. During the consultation period of the previous application, no comments or concerns had been raised from the Archaeological Service and considering the location of the works proposed, the proposal was considered acceptable in relation to this impact.

6.9.2 Therefore, as a result of the above assessment and as previously considered, the Proposed Development does not materially differ to the previous submission and is considered to comply with the requirements of Policy M6 of the adopted LDP.

6.10 Lighting

6.10.1 The Proposed Development includes the introduction of lighting owing to the nature of the proposals. This will be provided within the tunnel, as well as pedestrian lighting in the form of street lighting. The application is therefore accompanied by a Lighting Strategy, which details were discharged under the stipulations of Condition 17 application ref: DA/19/1549. The application is also supported by an updated lighting report, in the context of biodiversity considerations, it is crucial for the proposed lighting to be mindful of potential impacts on bats. The technical specifications have been updated in line with the guidance *'GN08/ 23 Bats and Artificial Lighting in the UK – Bat Conservation Trust and Institution of Lighting Professionals'.*

6.10.2 The key lighting elements designed for the tunnel and junction areas are carefully planned to enhance both functionality, as well as aesthetics. Ceiling-mounted functional lighting within the tunnel ensures visibility and safety for all users. Complementing this is the feature lighting, which casts a serene 'blue hue' on the soffit, adding a tranquil ambiance to the environment. At the junctions, lighting columns provide essential illumination, ensuring that the area is well-lit for ease of navigation and security. Together, these lighting components not only fulfil practical requirements but also contribute to creating a visually appealing and inviting space.

6.10.3 The updated lighting strategy accompanying the application assesses the initial lighting conditions at the western and eastern cliff faces of the Fastrack Bus Network Expansion (Bean Tunnels) scheme. The report considers existing lighting and light pollution on the site, as well as projected post-occupation lighting levels. It anticipates minimal impact on lighting levels near the tunnel entrance and notes the exclusion of factors such as blocking features from the analysis, which presents a worst-case scenario for potential light spill. It concludes that, it is unlikely that light levels either side of the tunnel entrance will not significantly increase because of the Proposed Development. Any increase in light levels will

not be above 0.4 Lux of the baseline levels recorded 10 meters from either side of the tunnel entrance and therefore considered acceptable.

6.10.4 The lighting design will balance the safety of pedestrians, cyclists and other road users with the potential landscape, visual and biodiversity impacts. It is therefore concluded that the Proposed Development will comply with NPPF paragraph 191(c) and Policy M4 of the adopted LDP.

6.11 Noise and Vibration

6.11.1 The previous submission was supported by a desk-based Noise Impact Assessment undertaken by Jacobs. The initial desk-based assessment concluded the following:

'Noise & Vibration

Potential impacts resulting from the construction and operation of the proposed Bean Road Tunnel have been considered. To undertake this, nearby sensitive receptors for noise and vibration have been identified and then the potential impacts considered at these receptors, taking into account the existing level of noise and vibration at the receptors.

Construction

Given the distance to sensitive receptors, the vibration generated by construction activities would not be of the magnitude to cause and structural damage to buildings or even annoyance to occupants.

Operation

The buses are planned to be electric and would therefore have little engine noise, so any noise generated would be from the interaction of the tyres and the road surface. When within the tunnel there would be little noise generated from the buses to the surrounding environment but to minimize any possible reverberation in the tunnel it is proposed to use a low noise bituminous surfacing. Given the large volume of traffic on the surrounding local road network the extra noise from the buses would be minimal. In addition, the junction created for the buses to join the local road network is not expected to alter the noise generating characteristics of the existing traffic.

Within the EQ there are currently no noise sensitive receptors, and any development would need to take account of the noise from the buses at sensitive receptors. Given that the local roads are already used by vehicles of this size and larger, the vibration from the buses is not expected to cause any noticeable impacts.

Summary

Based on this assessment it is considered there will be no significant noise- -related construction or operational effects from the Bean Road Tunnel, and no further assessment is required'.

6.11.2 Considering the above assessment made previously by Jacobs, we do not anticipate any material changes proposed given the nominal additions as set out in the introductory chapters. The previous assessment therefore remains applicable to the proposals and the assessment is unchanged given that the proposal is not likely to give rise to any unduly adverse impacts. In this regard, the Proposed

Development is considered to comply with the requirements of Policies M2 of the adopted development plan.

6.12 Structural Survey / Land Stability

6.12.1 The original application was supported by a Structural Survey and Land Stability Survey prepared by Jacobs. The original assessment concluded the following:

'Structural Survey / Land Stability Survey

There are no nearby structures that require a structural survey due to the influence of the new tunnel. It is proposed to backfill the existing northern haulage tunnel, as part of the works and a survey of it is anticipated to be required before the backfill can be designed and completed.

Cliff Stability

At the base of the cliffs on both sides there is evidence of some loose material that may have fallen from the cliff itself and some left behind from the historic quarrying operation. Figure 10 shows accumulated debris in the EQ side, but this is thought to have mainly been left from the quarrying operation. As part of the ground investigation the depth of these loose deposits may be further investigated, this will help confirm if there is intact rock beneath the visible surface.

An aerial drone survey has been completed and visible discontinuities have been identified in the photography and reviewed against existing discontinuity data from surveys undertaken for the former haulage tunnels and within the Bluewater Quarry. These data have been used to inform the likely discontinuity sets that will cause stability problems for the cliff face or tunnel during construction. As part of the further ground investigation, work may be undertaken to confirm and assess these discontinuities within the rock face on site. Using this information and the main orientation of the cliff, sets of joint interactions which are unstable, showing low factors of safety will be identified. In order to deal with this issue during construction and operation, the action will be to install rockfall netting to protect users of the tunnel as well as operatives during the construction process; this will be similar to the solution adopted in the previous Fastrack works which has been proven successful. Once the construction is finished, a section of false tunnel (or tunnel hood) will be built at both ends to ensure that any material that might become detached from the cliff face and escape the metallic net will not fall into public access areas. This will be considered further in detailed design.

Figure 10 – Eastern quarry side, evidence of loose material accumulated at cliff base.

Source: Jacobs Planning Statement Dated November 2019

The tunnel during construction has also been checked for stability problems, there are a series of wedges that can become unstable during construction, in order to proceed safely a canopy will need to be installed at intervals, a schematic representation in shown in Figure 11. This will also serve to minimize ground settlement affecting Bean Road.

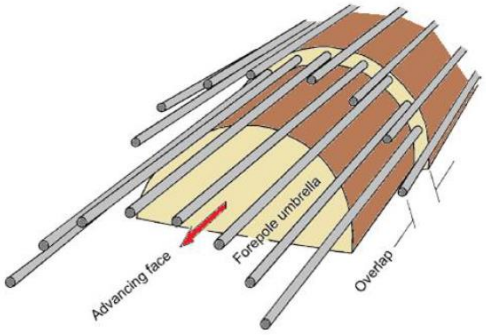


Figure 11 – Schematic representation of canopy used to protect against wedges during excavation and reduce ground movements.

Source: Jacobs Planning Statement Dated November 2019

Utilities in Bean Road

Utility companies have been contacted to confirm details of existing assets on site. Some degree of ground movement is expected from the tunnel construction. The proposed canopy will have a double function, in addition to mitigate against potential rock wedges that might form during construction, it will help reduce the amount of surface settlement expected. The construction sequence has been modelled with and without the canopy; details can be adjusted to further reduce the expected settlement, should it be required by utility companies, in particular Thames Water, which has major water mains in Bean Road. An analysis with the RS2 software has been completed to assess the expected level of ground movement show that near ground level the expected movements will be approximately 6mm.

Internal Lining

It is proposed that the tunnel will be lined internally from pavement level up to approx. 3m above the ground with a cladding of graffiti-resistant metal-ceramic panels. Uplighting can then be provided behind the cladding, with suitable protection to discourage wildlife, e.g. pigeons.

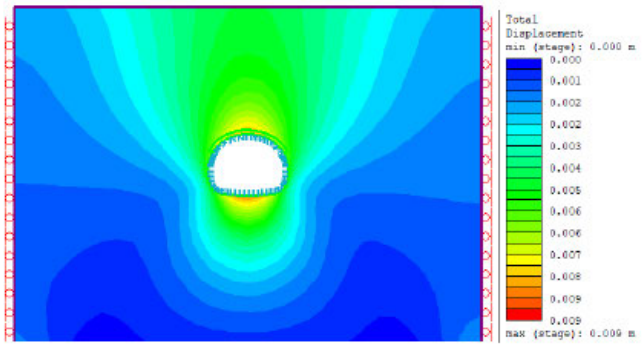


Figure 12 – Initial ground movement expected after excavation and primary lining have been completed. ,

Source: Jacobs Planning Statement Dated November 2019

6.12.2 Considering the above assessment made previously by Jacobs, we do not anticipate any material changes proposed, given the nominal additions as set out in the introductory chapters. The previous assessment therefore remains applicable to the proposals and the assessment is unchanged given that the proposal is not likely to give rise to any unduly adverse impacts.

6.12.3 In this regard, the Proposed Development is considered to comply with the requirements of Policies M2 of the adopted development plan.

6.13 Utilities

6.13.1 The original application was supported by a Utilities Statement prepared by Jacobs. The original assessment concluded the following:

'C2 enquiries to determine the locations of utilities have been undertaken and the following paragraphs summarise any issues and discussions that have taken place. Refer also to Utilities Plan B2350500-JAC-DRG-HA- 0017 – Utilities.

Thames Water (TW) – Thames Water have several large water mains along Bean Road, some of which are jointed ductile iron pipes, as well as smaller foul drainage pipes. These utilities will affected by any ground settlement as a result of tunnel construction. KCC have commenced a process of engagement and liaison with TW. In any case the design of the tunnels has been progressed assuming that any settlement should be limited by considerations of possible damage to the water mains. An Asset Protection Agreement with Thames Water may be required to progress this issue further.

TW also have a water main in Bluewater Parkway which will be marginally affected by the road works, but it is considered that normal precautions will be sufficient to assure that there will be no detrimental effect to this utility.

Southern Gas Networks (SGN) – SGN have a 315mm dia PE gas main in Bean Road which may be affected by any settlement associated with tunnel construction. However preliminary discussions with this stakeholder have indicated that the PE main is sufficiently flexible to absorb any settlement.

In addition SGN have a low-pressure gas main in Bluewater Parkway, but this is unlikely to be affected by the works.

UKPN have a cable supplying street lighting in Bean Road, which is routed from the sub-station adjacent to Bluewater Parkway, beside and behind the substation up to Bean Road. This cable may be affected by the extension of Lake 4 northwards and may need to be re-routed slightly. In addition, adjustments/protection may need to be provided for the UKPN HV cable running along the eastern verge of Bluewater Parkway and into Lime Tree Avenue.

BT – there are BT cables along the eastern verge of Bluewater Parkway, over which the new road will cross. Although these cables are at a reasonable depth, they may still need to be protected from the highway loading.

Bluewater have a cable network and jointing manholes for comms and street lighting on the western

verge of Bluewater Parkway, some of which will need to be deepened and/or moved as a result of the widening of the northbound carriageway of Bluewater Parkway. Bluewater's cable contractor is currently surveying and assessing the extent of works to accommodate the widening'.

6.13.2 Considering the above assessment made previously by Jacobs, we do not anticipate any material changes proposed, given the nominal additions as set out in the introductory chapters. The previous assessment therefore remains applicable to the proposals and the assessment is unchanged given that the proposal is not likely to give rise to any unduly adverse impacts.

6.14 Summary and Conclusions

6.14.1 In principle policy support for this important strategic infrastructure proposal is established within the adopted Local Plan. The location of the Proposed Development forms part of a wider strategic growth and infrastructure strategy for Kent and is entirely appropriate and necessary, subject to detailed design and environmental considerations.

6.14.2 The Proposed Development is therefore considered an acceptable form of development that raises no principal land use concerns. The Proposed Development aligns with the envisioned strategic connections described in the outline proposals for Eastern Quarry.

6.14.3 The Site is not located within any statutory designated areas or sites. The various assessments undertaken have covered a range of key environmental issues. Those of relevance to the Proposed Development have been considered principally in relation to the planning policy framework provided by the statutory development plan.

6.14.4 On this basis, it is considered the Proposed Development is considered acceptable and fully meets the requirements set by national and local planning policy and guidance.

7 Conclusions

7.1.1 This Planning Statement has been prepared by AUK on behalf of KCC Major Infrastructure Capital Programme in support of full planning permission for infrastructure works at Bean Tunnel (the Proposed Development).

7.1.2 The planning application is made for:

'The construction of a new tunnel and associated road works for bus, cycling and pedestrian access to the east of Bluewater Shopping Centre, to link the Eastern Quarry, being developed as part of Ebbsfleet Garden City, and Bluewater shopping centre through a chalk spine which separates the two former quarries.'

7.1.3 Section 38(6) of the Planning and Compulsory Act 2004 requires that an application for planning permission should be determined in accordance with the Development Plan unless material considerations indicate otherwise.

7.1.4 Chapter 3 of this Planning Statement has identified the relevant policies from the statutory Development Plan, which comprises the adopted Dartford Development Plan, as well as the provisions contained within national guidance of relevance to the proposal. The development of the proposed infrastructure works are accepted within the Plan and is supported by national planning policy which encourages the use of sustainable modes of travel. The earlier policy response has demonstrated and that such schemes, major developments, need to make provision fort Fastrack as part of hr planning proposals subject to detailed environmental considerations.

7.1.5 The location of the proposed expansion and improvement works at the Bean Tunnel is therefore considered an acceptable form of development that raises no principal land use concerns.

7.1.6 The various technical assessments undertaken to support the application submission cover a range of key environmental issues. Those of relevance to the Proposed Development have been considered in the previous Chapter in relation to the planning policy framework provided by the adopted Development Plans. The technical assessments have identified that the Proposed Development has no significant adverse effects on locally designated sites of biodiversity importance, or significant impacts in terms of landscape, accessibility, biodiversity, local amenity, or flood risk matters. Moreover, mitigation measures proposed are in accordance with the policy requirements, particularly in the enhancement of nature conservation interests within the site.

7.1.7 Having regard to the details submitted with this application submission, the Proposed Development is considered acceptable in planning terms and should be determined favourably in accordance with the adopted Dartford Development Plan, as well as provisions contained within national guidance. The planning application and proposals contained herein should therefore it is respectfully requested that planning permission is granted without delay.

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